




UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/700,315	10/31/2003	Karl-Heinz Schuster	021833-000300US	5458
20350	7590	03/23/2006	EXAMINER	
TOWNSEND AND TOWNSEND AND CREW, LLP			LEE, HWA S	
TWO EMBARCADERO CENTER				
EIGHTH FLOOR			ART UNIT	
SAN FRANCISCO, CA 94111-3834			PAPER NUMBER	
			2877	

DATE MAILED: 03/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/700,315	Applicant(s) SCHUSTER, KARL-HEINZ 	
	Examiner Andrew Hwa S. Lee	Art Unit 2877	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-49 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-49 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>2/2/04</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement filed 2/2/04 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered.

A copy of JP 08327453A could not be found.

Specification

1. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-49 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- a. With regards to **claims 1 and 10**, and their respective depending claims, the last clause is unclear where the claims state, “wherein an amount of the suppression the one of the radial component and the tangential component gradually increases...” Is the suppression increasing or is one of the components increasing?
- b. With regards to **claim 30**, “the optical axis” lacks antecedent basis and is incomplete for omitting essential structural cooperative relationships of elements (the optical axis of what element?), such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01.
- c. With regards to **claim 31**, the recitation “...measuring light extends over a limited circumferential sector of less than 30 degrees” is unclear. The use of “extends over” seems contrary to “less than”. If the circumferential sector is “limited” what aspect of the sector is being limited? The claim is so unclear that claim 31 and depending claim 32 will not be examined.
- d. **Claims 46 and 47** use a common instead of a decimal point, failing to conform with current U.S. practice.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 30, 33-35, 40-42, 48, and 49, as understood by the examiner,** are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuchel (US 4,872,755).

Kuchel shows an interferometer for measuring optical phase differences comprising:

- providing an interferometer ();
- polarizing the beam of measuring light ();
- rotating the polarization direction about the optical axis;
- arranging the sample in the beam of measuring light while rotating the polarization direction;
- interferometrically determining a surface map of the optical surface.

Kuchel does not expressly show the sample being a substrate and does not show the step of comparing the measured surface map with a target shape.

With regards to the sample being a substrate, Kuchel teaches that the sample can be flat or spherical optical surfaces, therefore it would be flat optical components would meet the definition of a substrate thus meeting the limitation.

Art Unit: 2877

With regards to comparing the measured surface map to a target shape, Official Notice is taken that comparing a measured surface map to a target map is well known. At the time of the invention, one of ordinary skill in the art would have taken the measured surface map and compared it to the desired shape in order to determine how well the sample has the desired shape and to determine where any of the deviations are.

With regards to claim 33, Kuchel does not expressly state that the beam is circular in cross section however as the figures show, the beam is circular.

With regards to **claim 34**, Kuchel shows the generation of several interferograms but does not expressly state the taking of the average, however taking several measurements and averaging them is notoriously well known and a skill artisan would have done so obtain a better final measurement.

With regards to **claim 35**, Kuchel does not expressly show the rotating of the substrate and getting another measurement. Applicant discloses that the prior art performed this function and at the time of the invention, one of ordinary skill in the art would have rotated the substrate to obtain another measurement in order to eliminate errors caused by the optical elements of the interferometer.

With regards to **claims 40-42**, Official Notice is taken that further machining an optical surface is well known after taking surface measurements and the repeating thereof. At the time of the invention, one of ordinary skill in the art would have further machined the optical surface in order to get it to the target shape within a threshold.

With regards to **claims 48 and 49**, the claims do not show that the system or a lens of the system has any structural differences from the prior art beyond the fact that the system or lens of

the system was made by the present invention. Since the claimed limitations do not differ structurally from the prior art, the limitations are met.

Allowable Subject Matter

4. **Claims 1-29, 39, and 43-45** would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

5. **Claims 36-38, 46 and 47** would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

6. **Claim 39** is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Several facts have been relied upon from the personal knowledge of the examiner about which the examiner took Official Notice. Applicant must seasonably challenge well known statements and statements based on personal knowledge when they are made by the Board of Patent Appeals and Interferences. In re Selmi, 156 F.2d 96, 70 USPQ 197 (CCPA 1946); In re Fischer, 125 F.2d 725, 52 USPQ 473 (CCPA 1942). See also In re Boon, 439 F.2d 724, 169 USPQ 231 (CCPA 1971) (a challenge to the taking of judicial notice must contain adequate information or argument to create on its face a reasonable doubt regarding the circumstances justifying the judicial notice). If applicant does not seasonably traverse the well-known statement during examination, then the object of the well known statement is taken to be admitted prior art. In re Chevenard, 139 F.2d 71, 60 USPQ 239

(CCPA 1943). A seasonable challenge constitutes a demand for evidence made as soon as practicable during prosecution. Thus, applicant is charged with rebutting the well-known statement in the next reply after the Office action in which the well known statement was made.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew Hwa S. Lee whose telephone number is 571-272-2419. The examiner can normally be reached on Tue-Fr.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory J. Toatley Jr. can be reached on 571-272-2800 ext 77. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Andrew Hwa Lee
Primary Examiner
Art Unit 2877